

CLAIMS:

1. Method for driving an actuator, the method comprising the step of suitably amending the electrical damping of the actuator.
2. Method according to claim 1, wherein the electrical damping of the actuator is amended by amending the electrical resistance of an actuator drive loop.
3. Method according to claim 2, wherein the electrical resistance of the actuator drive loop is amended by switching in or out an electrical damping element providing a negative resistance.
4. Method according to any of claims 1-3, wherein the electrical damping of the actuator is increased with respect to the damping during normal operative conditions when an actuator position deviates from a target position, and wherein the electrical damping of the actuator is decreased to the normal damping when the actuator has recovered the target position.
5. Method according to any of claims 1-4, applied in an optical disc drive for radially driving an objective lens radial actuator, wherein the electrical damping of the radial actuator is increased when a radial error signal indicates a radial error exceeding a predefined threshold, or when the radial error signal becomes absent;
and wherein the electrical damping of the radial actuator is decreased to the normal damping when the radial error signal indicates said radial error decreasing below said predefined threshold, or when the radial error signal returns, respectively.
6. Method according to any of claims 1-4, applied in an optical disc drive for axially driving an objective lens focus actuator, wherein the electrical damping of the focus actuator is increased when a focus error signal indicates a focus error exceeding a predefined threshold, or when the focus error signal becomes absent;

and wherein the electrical damping of the focus actuator is decreased to the normal damping when the focus error signal indicates said focus error decreasing below said predefined threshold, or when the focus error signal returns, respectively.

- 5 7. Method according to any of claims 1-4, applied in an optical disc drive for radially driving an objective lens radial actuator or for axially driving an objective lens focus actuator, wherein the electrical damping of the actuator is increased in response to a command indicating a jump to another track, or during a power-up phase, and wherein the electrical damping of the actuator is decreased to the normal damping when the new target
10 track has been reached or when the power-up phase has ended, respectively.
8. Actuator driver circuit having a negative internal resistance.
9. Actuator driver circuit comprising a drive signal source and an electrical
15 damping element having a negative resistance connected in series with the drive signal source.
10. Actuator driver circuit according to claim 9, comprising controllable means for selectively switching said electrical damping element into or out of a signal path from a drive
20 signal source output to a driver circuit output.
11. Actuator driver circuit according to claim 9 or 10, comprising controllable means for selectively switching components of said electrical damping element into or out of operation in order to adjust damping properties of the electrical damping element.
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12. Actuator assembly comprising an actuator, a drive signal source, and an electrical damping element having a negative resistance connected in series with the drive signal source and the actuator.
- 30 13. Actuator assembly according to claim 12, further comprising controllable means for selectively switching said electrical damping element into or out of a signal path between the drive signal source and the actuator.

14. Actuator assembly according to claim 12 or 13, further comprising controllable means for selectively switching components of said electrical damping element into or out of operation in order to adjust damping properties of the electrical damping element.

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15. Disc drive apparatus for reading or writing a disc, the apparatus comprising a pickup element and at least one actuator for manipulating the pickup element;

wherein the disc drive apparatus comprises an actuator driver circuit according to any of claims 8-11 or an actuator assembly according to any of claims 12-14.

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16. Disc drive apparatus according to claim 15, wherein said pickup element is an objective lens of an optical system for scanning tracks of an optical disc.